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09/816,706	03/23/2001	Peter Ka-Fai Chow	F0996/2002P	5952

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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2665

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DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,706

Applicant(s)

CHOW, PETER KA-FAI

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "112" has been used to designate both a host MAC and Ethernet Controllers (see Fig. 1). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: on page 7, line 8 "tripped" should be "stripped".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933).

5. Regarding claims 1 and 5, Hinchey discloses a method and a line controller for modifying a packet to be compatible with a network, the method comprising the steps of and the controller comprising means for: (a) detecting a field in a frame (col. 1, line 66-col. 2, line 21); (b) stripping the field and a frame check sequence (FCS) in the frame (col. 1, line 66-col. 2, line

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21; col. 5, lines 1-3; and col. 5, lines 4-28); (c) recalculating the FCS for the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28); and (d) adding the recalculated FCS to the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28).

Hinchey does not disclose that the field is a limited automatic repeat request (LARQ) header.

Mallory teaches, in an Ethernet network, modifying an Ethernet frame to include an LARQ header in order to reduce the effective error rate of an unreliable frame-based communication channel or network (col. 4, lines 16-38 and col. 6, lines 9-20). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the field be an LARQ header in order to convert an Ethernet frame into an LARQ Ethernet frame and vice versa.

6. Regarding claim 3, referring to claim 1, Hinchey in view of Mallory implicitly discloses (e) sending the stripped frame with the recalculated FCS to an Ethernet controller (Hinchey: col. 1, line 66-col. 2, line 29, esp. col. 2, lines 22-29; col. 5, lines 1-3; and col. 5, lines 4-28) where an "Ethernet controller" is broadly defined as an Ethernet device capable of switching a packet.

7. Regarding claim 6, referring to claim 5, Hinchey in view of Mallory implicitly disclose that an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame. Although Hinchey in view of Mallory do not disclose the "nut and bolts" of the invention, it is implicit that a signal is needed to indicate that a packet translation is required.

8. Regarding claim 7, referring to claim 5, Hinchey in view of Mallory implicitly discloses that the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame. Although Hinchey

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in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that signals are needed to indicate that a packet translation is required and how the translation is to be performed.

9. Regarding claim 8, referring to claim 5, Hinchey in view of Mallory implicitly discloses that an asserted fourth signal to the third logic block enables the recalculation of the FCS.

Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that new FCS should be calculated.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933) as applied to claim 1 above, and further in view of Callon et al (USPN 5,251,205).

11. Regarding claim 2, referring to claim 1, Hinchey in view of Mallory does not disclose that the stripping step (b) further comprises: (b1) placing information in the LARQ header in a frame status frame which will follow the stripped frame. Rather Hinchey in view of Mallory discloses placing the stripped information within a designated portion of the frame (Hinchey: col. 4, lines 5-34). Callon teaches, in a packet transmission system supporting multiple protocols, that packets are fragmented if the maximum transmission unit of a link is smaller than the packet (col. 48, lines 30-43). It would have been obvious to one of ordinary skill in the art at the time of the invention to place the stripped information in a subsequent frame (as broadly defined, a “frame status frame”) in order to ensure that the length of the stripped frame is within the transmission size of the stripped frame’s network without losing the information contained in the stripped portion of the frame.

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12. Claims 4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933) in further view of Gibson et al (WO 96/13106).

13. Regarding claim 4, referring to claim 3, Hinchey in view of Mallory does not expressly disclose (f) determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern. Gibson teaches, in an Ethernet network, determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern in order to remotely wake up a computer which is in sleep mode to save energy (page 6, lines 15-22; page 7, lines 14-19; and page 9, line 21-page 12, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine if a bit pattern at a set byte location in the stripped frame matches a wake pattern in order to remotely wake up a computer which is in sleep mode to save energy.

14. Regarding claim 9, Hinchey discloses a controller comprising: a first logic block for detecting a field in a frame (col. 1, line 66-col. 2, line 21), a second logic block for stripping the field and a FCS in the frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28), and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28). Hinchey does not disclose that the field is a limited automatic repeat request (LARQ) header. Mallory teaches, in a home phone Ethernet network, modifying an Ethernet frame to include an LARQ header in order to reduce the effective error rate of an unreliable frame-based communication channel or network (col. 4, lines 16-38 and col. 6, lines 9-20). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the field be an LARQ header in order to convert an Ethernet frame into an LARQ Ethernet frame and vice

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versa such that the frame can be transmitted in a home phone network. Hinchey in view of Mallory does not expressly disclose that the system comprises an Ethernet controller in a sleep mode. Gibson teaches, in an Ethernet network, having Ethernet devices enter sleep mode in order to conserve power (page 6, lines 15-22; page 7, lines 14-19; and page 9, line 21-page 12, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to have an Ethernet controller in a sleep mode such that the Ethernet controller conserves power.

15. Regarding claim 10, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that a packet translation is required.

16. Regarding claim 11, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that signals are needed to indicate that a packet translation is required and how the translation is to be performed.

17. Regarding claim 12, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that an asserted fourth signal to the third logic block enables the recalculation of the FCS. Although Hinchey in view of Mallory do not disclose the “nut and

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bolts" of the invention, it is implicit that a signal is needed to indicate that new FCS should be calculated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman



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